

AMENDMENTS TO THE CLAIMS

This listing of the claims will replace all prior versions and listings of the claims in this application.

LISTING OF THE CLAIMS:

Claims 1-3. (Canceled)

4. (Currently amended) In a process for the continuous hot-dip galvanizing of a steel strip containing oxidizable addition elements in a proportion allowing the mechanical properties of the steel to be improved, in which process the strip passes through a galvanizing furnace in a reducing atmosphere, the furnace including heat treatment sections, for heating, soaking and cooling, and wherein the strip is then dipped into a galvanizing bath, the strip having been subjected to an oxidation treatment under conditions as regards temperature, duration and oxygen content of a gas in which the strip is immersed, such that the oxidizable addition elements are essentially oxidized within the strip, before they can migrate to the surface in order to form thereat a layer of oxides of a kind liable to create galvanizing defects, the improvement comprising:

subjecting the strip to the oxidation treatment upstream of the inlet section of the furnace, wherein the gas in which the strip is immersed for the oxidation treatment is air, wherein this strip is heated to a temperature between approximately 150⁰ C and 400⁰ C for the oxidation treatment; and wherein the oxidation at the surface and immediately beneath the surface of the strip is controlled by a controlling temperature/time pair in such a way that the temperature of the steel strip is increased when the line speed increases and the oxidation treatment time decreases, and vice versa; and

~~Process according to claim 1, characterized in that wherein~~ the oxidation treatment time is controlled by modifying the length of the strip (1) between the outlet of a heating zone ~~means (8)~~ located upstream of the furnace and the inlet of the galvanizing furnace.

5. (Currently Amended) In a process for the continuous hot-dip galvanizing of a steel strip containing oxidizable addition elements in a proportion allowing the mechanical properties of the steel to be improved, in which process the strip passes through a galvanizing furnace in a reducing atmosphere, the furnace including heat treatment sections, for heating, soaking and cooling, and wherein the strip is then dipped into a galvanizing bath, the strip having been subjected to an oxidation treatment under conditions as regards temperature, duration and oxygen content of a gas in which the strip is immersed, such that the oxidizable addition elements are essentially oxidized within the strip, before they can migrate to the surface in order to form thereat a layer of oxides of a kind liable to create galvanizing defects, the improvement comprising:

subjecting the strip to the oxidation treatment upstream of the inlet section of the furnace, wherein the gas in which the strip is immersed for the oxidation treatment is air, wherein this strip is heated to a temperature between approximately 150⁰ C and 400⁰ C for the oxidation treatment; and wherein the oxidation at the surface and immediately beneath the surface of the strip is controlled by a controlling temperature/time pair in such a way that the temperature of the steel strip is increased when the line speed increases and the oxidation treatment time decreases, and vice versa;

wherein the oxidation treatment time is controlled by modifying the length of the strip between the outlet of a heating zone located upstream of the furnace and the inlet of the galvanizing furnace; and

Process according to claim 4, characterized in that further wherein the length of strip between the outlet of the heating means (8)-zone and the inlet of the galvanizing furnace (3) is modified by moving the heating means (8)-zone along the direction of the strip.

6. (Currently Amended) In a process for the continuous hot-dip galvanizing of a steel strip containing oxidizable addition elements in a proportion allowing the mechanical properties of the steel to be improved, in which process the strip passes through a galvanizing furnace in a reducing atmosphere, the furnace including heat treatment sections, for heating, soaking and cooling, and wherein the strip is then dipped into a galvanizing bath, the strip having been subjected to an oxidation treatment under conditions as regards temperature, duration and oxygen content of a gas in which the strip is immersed, such that the oxidizable addition elements are essentially oxidized within the strip, before they can migrate to the surface in order to form thereat a layer of oxides of a kind liable to create galvanizing defects, the improvement comprising:

subjecting the strip to the oxidation treatment upstream of the inlet section of the furnace, wherein the gas in which the strip is immersed for the oxidation treatment is air, wherein this strip is heated to a temperature between approximately 150⁰ C and 400⁰ C for the oxidation treatment; and wherein the oxidation at the surface and immediately beneath the surface of the strip is controlled by a controlling temperature/time pair in such a way that the temperature of the steel strip is increased when the line speed increases and the oxidation treatment time decreases, and vice versa;

wherein the oxidation treatment time is controlled by modifying the length of the strip between the outlet of a heating zone located upstream of the furnace and the inlet of the galvanizing furnace.

~~Process according to claim 5, characterized in that~~ and further wherein the length of the strip between the outlet of the heating means (8) ~~zone~~ and the inlet of the galvanizing furnace (3) is modified by adjusting the length of at least one vertical or horizontal strand of the strip, or a combination of the two.

7. (Canceled)

8. (Canceled)

9. (Canceled)

10. (Canceled)

11. (Canceled)

12. (Canceled)